

REMARKS

Claims 1-4 are pending in the present application. Claims 1 and 2 are herein amended. Claims 3 and 4 are withdrawn from the consideration. No new matter is believed to have been entered through the claim amendments. Further, upon belief, it is respectfully submitted that this paper is fully responsive to the outstanding Office Action. It is believed that the below arguments coupled with the claim amendments overcome the various art rejections.

Examiner Interview

Applicants graciously thank the Examiner for granting their request for an Examiner Interview which was held on February 23, 2009.

Claim Rejections - 35 U.S.C. § 112

Claims 1-2 were treated under 35 U.S.C. 112, sixth paragraph. 35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language “shall be construed to cover the corresponding structure....described in the specification and equivalents thereof.”

Claims 1-2 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention. Claim elements “sticking means” and “pre-cut means” are means (or step) plus function limitation that invokes 35 U.S.C. 112, sixth paragraph. However, the written description fails to sufficiently disclose the corresponding structure, material, or acts for the claimed function.

The rejection is respectfully traversed.

(A) Whether a claim reciting an element in means- (or step-) plus-function language fails to comply with 35 U.S.C. 112, second paragraph, because the specification does not disclose adequate structure (or material or acts) for performing the recited function is closely related to the question of whether the specification meets the description requirement in 35 U.S.C. 112, first paragraph. See *In re Noll*, 545 F.2d 141, 149, 191 USPQ 721, 727 (CCPA 1976) (unless the means-plus-function language is itself unclear, a claim limitation written in means-plus- function language meets the definiteness requirement in 35 U.S.C. 112, second paragraph, so long as the specification meets the written description requirement in 35 U.S.C. 112, first paragraph). However, 35 U.S.C. 112, sixth paragraph, does not impose any requirements in addition to those imposed by 35 U.S.C. 112, first paragraph. See *In re Knowlton*, 481 F.2d 1357, 1366, 178 USPQ 486, 492-93 (CCPA 1973).

Under certain limited circumstances, the written description *does not have to explicitly describe the structure (or material or acts)* corresponding to a means- (or step-) plus-function

limitation to particularly point out and distinctly claim the invention as required by 35 U.S.C. 112, second paragraph. See *Dossel*, 115 F.3d at 946, 42 USPQ2d at 1885. Under proper circumstances, drawings may provide a written description of an invention as required by 35 U.S.C. 112. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1565, 19 USPQ2d 1111, 1118 (Fed. Cir. 1991). Rather, disclosure of structure corresponding to a means-plus-function limitation may be implicit in the written description if it would have been clear to those skilled in the art what structure must perform the function recited in the means-plus-function limitation.

In the present application, it is submitted that the originally-filed Specification describes the "pre-cut means" of at least claim 1 of the present application therein. For example, as stated on at least page 9, lines 5-11 of the originally-filed Specification:

"... a **pre-cut device 13** for forming a substantially circular cut in a strip material A fed out from the support roller 12 to form a dicing tape T (refer to FIG. 2); and a sticking means 34 that peels off the dicing tape T and sticks the same to the ring frame RF and the semiconductor wafer W...."

Further, the Specification at page 12, lines 17-26 states:

"... Thus, the peel plate 26 and the press roller 27 construct the sticking means 34. [0016] The **pre-cut device 13** includes a die roller 35 located at the film FL side of the strip material A and a die receive plate 36 disposed so as to sandwich the strip material A between the die roller 35 and the same...."

The aforementioned portions of the Specification are but a few examples in which the Specification describes "pre-cut means", and further, it is submitted that the Specification

throughout provides additional description for the aforementioned features of at least claim 1 of the present application.

For example, an equivalent of the pre-cut device 13 is described further in the following portion of the Specification:

“For example, in the above embodiment, such a case has been described that the die roller 35 is employed for the pre-cut device 13. The pre-cut device 13, however, may be replaced with a variety of structures. Specifically, as shown in Fig. 5, a die plate 51 equipped with a substantially circular blade 50 may be employed in place of the die roller 35; and in place of the die receive plate 36, a movable roller 52 may be employed.” (Specification; page 17, lines 18-26).

Further, another equivalent of the pre-cut device 13 is described in the following portion of the Specification:

“Further, an arm type cutter, as shown in Fig. 6, may be employed for the pre-cut device 13. The pre-cut device of this type includes a motor M3 fixed to a frame (not shown), a rotation member 60 rotatable by the drive of motor M3 and a blade 62 held by the rotation member 60; and substantially circular dicing tape T can be formed by the rotation of the rotation member 60. (Specification; page 18, lines 4-11).

Furthermore, claim 1 is herein amended to more particularly describe the features claimed therein by reciting, “peeling means for peeling off the dicing tape, located more towards the downstream of the sheet feeding direction than the pre-cut means; and
~~a sticking~~ pressing means for fixing the semiconductor wafer to the ring frame by ~~peeling off~~
~~said dicing tape from the base sheet and sticking~~ pressing the peeled dicing tape onto the ring frame.”

As a non-limiting example, support for the aforementioned amendment to claim 1 may be found in at least page 12, line 17 which states: "... Thus, the peel plate 26 and the press roller 27 construct the sticking means 34." Further, as clearly illustrated in at least FIGS. 1 and 2 of the present application, a sticking means 34 comprises the peel plate 26 and the press roller 27.

Further, as another non-limiting example, support for the aforementioned amendments to claim 1 may be found in the Specification at page 11, lines 11-17 states:

"... a peel plate 26 that turns the strip material A sharply to peel off the dicing tape T; a press roller 27 that is located at the front end side of the peel plate 26 and is adapted to be movable vertically and to press the peeled dicing tape T onto the upper face of the ring frame RF and the semiconductor wafer W...."

Accordingly, in view of the foregoing statements, it is submitted that a Person of Ordinary Skill in the Art would readily appreciate the aforementioned features of at least claim 1 of the present application in view of the originally-filed Specification.

(B) Further, MPEP § 2181(II) states that:

"If one employs means plus function language in a claim, one must set forth in the specification **an adequate disclosure** showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." *In re Donaldson Co.*, 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc).

(Emphasis added). As such, under U.S. law, all which is required is that adequate disclosure be present in the specification. To determine whether this standard has been met, the following test is applied:

The proper test for meeting the definiteness requirement is that the corresponding structure (or material or acts) of a means (or step)-plus-function limitation must be disclosed in the specification itself in a way that **one skilled in the art will understand what structure (or material or acts) will perform the recited function**. See *Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1381, 53 USPQ2d 1225, 1230 (Fed. Cir. 1999).

(MPEP § 2181(II), emphasis added).

In the present case, it is submitted (as described above) that the aforementioned features of at least claim 1 are adequately described in the originally-filed Specification of the present application, and further, that one skilled in the art would understand what structure (or material or acts) perform the recited function.

(C) The Office Action contends that “claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” The Office Action’s contention is respectfully traversed. Regarding definiteness, MPEP § 2173.02 states that:

The essential inquiry pertaining to this requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and

(C) The claim interpretation that would be given by **one possessing the ordinary level of skill in the pertinent art** at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. 112, second paragraph, the examiner must consider the claim as a whole to determine **whether the claim apprises one of ordinary skill in the art of its scope** and, therefore, serves the notice function required by 35 U.S.C. 112, second paragraph, by providing clear warning to others as to what constitutes infringement of the patent.

The present Specification as indicated above, discusses the various claimed features throughout. Accordingly, it is submitted that a Person of Ordinary Skill in the Art would be apprised of the various claim recitations.

In view of the foregoing, it is respectfully submitted that the rejection is overcome.

Claim Rejection - 35 U.S.C. § 102

Claim 1 was rejected under 35 U.S.C. 102(e) as being anticipated by Jeong et al. (U.S. Patent Application Publication No. 2004/0009650).

The rejection is respectfully traversed.

Claim 1 is herein amended to recite, “peeling means for peeling off the dicing tape, located more towards the downstream of the sheet feeding direction than the pre-cut means; and pressing means for fixing the semiconductor wafer to the ring frame by pressing the peeled

dicing tape onto the ring frame.” It is respectfully submitted that the cited art fails to describe at least the aforementioned recitations of claim 1 of the present application.

(D) It is submitted that in furthering the present rejection, the Office Action has improperly construed at least the feature of claim 1 of the present application of “pre-cut means.” More specifically, it is submitted that the Office Action has provided an unreasonably broad interpretation of the aforementioned feature of claim 1 of the present application.

The Examiner is respectfully requested to review **MPEP 2111 Claim Interpretation; Broadest Reasonable Interpretation – Claims Must Be Given Their Broadest Reasonable Interpretation**. At the aforementioned section of the MPEP, it is stated that:

“During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." >The Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005) expressly recognized that the USPTO employs the "broadest reasonable interpretation" standard:

The Patent and Trademark Office ("PTO") determines the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1).

415 F.3d at 1316, 75 USPQ2d at 1329. See also < *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).”

In the outstanding Office Action at page 4, the Examiner correlates the pre-cut means recitation of claim 1 of the present application with that of the cutter 35 of Jeong. However, in contrast to the pre-cut means of claim 1 (which recites “pre-cut means for forming a dicing tape by forming a cut in said film in accordance with the size of said ring frame to the strip material fed from the supporting means”), the alleged pre-cut means (cutter 135) of Jeong is described at paragraph [0055] as:

“... a cutter 135 inside the tape cutter portion 136 rotates along an inner arcuate surface of the ring frame 152, and then cuts the general dicing tape 30. The remaining portion 38 of the cut general dicing tape 30 is wound on a winding reel of the peeling unit 132 and is scrapped....”

Further, it appears as if the aforementioned description of Jeong is somewhat similar to that provided in the Background portion of the present application in which it is stated on page 1, lines 18-24 that:

“As for sticking of the dicing tape, the method is known in which after sticking a continuous dicing tape of a strip shape to the ring frame and the semiconductor wafer, a peripheral side of the dicing tape is cut off in accordance with the shape of the ring frame with a cutter.”

Further, the Specification of the present application at page 2, lines 16-23 states:

“... after a dicing tape continuing in a strip shape is stuck, a peripheral side of the tape is cut off with a cutter in accordance with the shape of the ring frame, there resides such a

disadvantage that the ring frame is considerably damaged by the cutter blade since the dicing tape is cut off within a surface of the ring frame.”

Accordingly, in view of the foregoing description of Jeong and the description of the conventional art in the present application, it is respectfully submitted that the pre-cut means of claim 1 of the present application is not described by Jeong.

(E) Additionally, regarding anticipation rejections, the Examiner is respectfully reminded that for a reference to **anticipate, the prior art must teach all the claim elements and the claimed arrangement.**

In a recent Federal Circuit decision (*Net MoneyIn v. Verisign* (Fed. Cir. 2008)), the court reiterated that for a reference to anticipate, the prior art must teach all of the claim elements and the claimed arrangement. The court specifically stated that:

“Section 102 embodies the concept of novelty—if a device or process has been previously invented (and disclosed to the public), then it is not new, and therefore the claimed invention is "anticipated" by the prior invention. . . . Because the hallmark of anticipation is prior invention, the prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’”

In view of the rigorous requirement annunciated by the Federal Circuit, it is respectfully submitted that the cited art fails to describe at least the pre-cut means of claim 1 of the present

application. Further, it is submitted that the reference fails to describe a structure which disposes pre-cut means in between supporting means and peeling means.

Furthermore, the Examiner is respectfully requested to review the section entitled “Objects of the Invention” of the present application at page 4, lines 4-13 which states:

“[Objects of the Invention] The present invention has been proposed in view of the above disadvantages. It is an object of the present invention to provide a mounting apparatus and a mounting method capable of forming dicing tapes in a predetermined shape in the process of feeding out a strip material while sticking the dicing tape to a semiconductor wafer and a ring frame immediately after the tape is formed, and thereby eliminating cutting process with a cutter after sticking the dicing tape.”

In view of the foregoing, it is respectfully submitted that the rejection is overcome.

Claim Rejections - 35 U.S.C. § 103

Claim 1 was rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujimoto et al. (U.S. Patent No. 6,238,515) in view of Kobayashi (U.S. Patent Application Publication No. 2004/0007327).

The rejection is respectfully traversed.

(F) Claim 1 is herein amended to recite, “peeling means for peeling off the dicing tape, located more towards the downstream of the sheet feeding direction than the pre-cut means;

and pressing means for fixing the semiconductor wafer to the ring frame by pressing the peeled dicing tape onto the ring frame.” It is respectfully submitted that the cited art, either alone or in combination, fails to teach or suggest at least the aforementioned recitations of claim 1 of the present application.

(G) In the outstanding Office Action at page 6, the Examiner concedes that Tsujimoto et al. does not specifically disclose a precutting means. Later on the same page, the Office Action contends that “Kobayashi discloses a dicing tape applying apparatus, including it is known in the art as equivalent to substitute non-cut tape for pre-cut tape, and include a cutting means (60) for later cutting the noncut tape (see Abstract).” The Office Action’s contention is respectfully traversed.

It is noted that Kobayashi specifically states, “a cutter cutting a non-cut dicing tape into a desired shape when it is applied.” Accordingly, in view of the clear description provided by Kobayashi, the dicing tape applying apparatus of Kobayashi is quite different from the pre-cut means of claim 1 of the present application as Kobayashi describes cutting non-cut dicing tape when it is applied.

In view of the foregoing, it is respectfully submitted that the rejection is overcome.

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Tsujimoto et al. in view of Kobayashi, and further in view of Murphy (U.S. Patent No. 5,730,816).

The rejection is respectfully traversed.

(H) As claim 2 depends from independent claim 1, it is submitted that claim 2 is patentable for at least the reason of its dependency therefrom. Further, nothing has been cited in Murphy which cures the aforementioned deficiencies of Kobayashi. Also, as the Office Action similarly concedes here that Tsujimoto et al. does not specifically disclose a precutting means as described above in section (G), it is submitted that the arguments presented above over claim 1 over the combination of Tsujimoto et al. and Kobayashi are applicable here where appropriate.

In view of the foregoing, it is respectfully submitted that the rejection is overcome.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

Application No.: 10/574,847
Art Unit: 1791

Amendment under 37 CFR §1.111
Attorney Docket No.: 062289

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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